

CLAIMS:

1. An electrophoretic display panel (1), comprising:
 - an electrophoretic medium (5) comprising charged particles (6);
 - a plurality of picture elements (2);
 - electrodes (3,4) associated with each picture element (2) for receiving a
- 5 potential difference; the charged particles being able to occupy extreme positions near the electrodes and intermediate positions in between the electrodes; the extreme positions being associated with extreme optical states; and
 - drive means (100) ,
- the drive means (100) being arranged for providing to each picture element (2)
- 10 - a reset potential difference for causing particles (6) to substantially occupy one of the extreme positions, and subsequently
 - a grey scale potential difference for causing the particles (6) to occupy the position corresponding to the image information,
- characterized in that the drive means (100) are arranged for providing an over-reset potential
- 15 difference prior to the application of the gray scale potential difference for over-resetting a picture element from an optical state to one of the extreme optical states, wherein the plurality of picture elements comprises two or more interspersed groups of picture elements, and in that the drive means are arranged for providing each group with its own application
- scheme (I, II) of overreset potential differences, the application schemes for overreset
- 20 potential differences differing from group to group in such manner that the time period during which an overreset condition is maintained differs between said groups for at least some transitions of a picture element from an initial optical state to a final optical state via an extreme optical state.
- 25 2. An electrophoretic display device as claimed in claim 1, wherein the drive means are arranged to provide overreset potential differences such that the application schemes for application of the overreset signals alternate between groups between frames.

3. An electrophoretic display panel as claimed in claim 1, wherein the drive means are arranged to supply each group of picture element with its own overreset potential difference, the application schemes for overreset potential differences differing from group to group only by a time difference (Δ).

5

4. An electrophoretic display panel as claimed in claim 1, wherein the drive means are arranged to supply each group with its own overreset signals, the application schemes for overreset signals differing from group to group such that only a difference in the applied potential difference is established between the groups.

10

5. An electrophoretic display panel as claimed in claim 1, wherein the drive means are arranged such that the application schemes (I, II) between groups of picture elements differ in that a time difference (Δ') is established between groups for those transitions (G2-B, G1-B, B-B) in which the overreset potential difference is applied during less than a maximum period, but, for all groups of picture elements, application of an overreset potential difference of maximum time length (W-B) are synchronized within a maximum time period having a common starting point (t_{start}) and an end point (t_{end}), and for all groups and transitions the application of overreset potential differences do not extend in time beyond said maximum time period ($t_{\text{start}}-t_{\text{end}}$).

20

6. A method for driving an electrophoretic display devices comprising a plurality of picture elements in which method reset potential differences are applied to picture elements of the display device, prior to application of grey scale potential differences to said picture elements, characterized in that over-reset potential differences for over-resetting a picture element from an optical state to an extreme optical state are applied, wherein the plurality of picture elements comprises two or more interspersed groups of picture elements, and in that each group is supplied with its own scheme of overreset potential differences, the application schemes for overreset potential differences differing from group to group in such manner that the time period at which an overreset condition is maintained differs between said groups of picture elements for at least some transitions of a picture element from an initial optical state to a final optical state via an intermediate optical state.

30

7. A method as claimed in claim 6, wherein the overreset potential differences are applied such that the application schemes for application of the overreset signals alternate between groups between frames.

5 8. A method as claimed in claim 6, wherein each group is supplied with its own overreset potential difference, the application schemes for overreset potential differences differing from group to group only by a time difference (Δ).

9. A method as claimed in claim 6, wherein each group with its own overreset
10 signals, the application schemes for overreset signals differing from group to group such that only a difference in the applied potential difference is established between the groups.

10. Computer program comprising program code means for performing a method
in accordance with the method as claimed in claim 6 when said program is run on a
15 computer.

11. Computer program product comprising program code means stored on a
computer readable medium for performing a method in accordance with the method as
claimed in claim 6 when said program is run on a computer.

20 12. Drive means for an electrophoretic display panel as claimed in claim 1.